

CLAIMS

What is claimed is:

1. A clutch drum assembly comprising:

A clutch drum and drive means mounted thereon where the clutch drum defines an axis of rotation and includes an end wall forming one central aperture. The drive means may be a drive spline or a fixed drive sprocket. Axially to one end of the drive means is a flange with one or more radially spaced minimally sized apertures. A spigot on the splined or fixed drive sprocket side of the drive means flange is used for mating with the central aperture in the end wall of the clutch drum when the drive means is inserted through the end wall of the clutch drum. Upon mating of the two members, the assembly is mechanically connected for unitary axial rotation by metal pressed from the end wall of the clutch drum through each of the minimally sized apertures on the drive means flange.

2. The clutch drum assembly as in claim 1, where the radially spaced minimally sized apertures in the drive means flange are countersunk or counter bored to the opposite side of the drive means flange, that is proximate to the end wall of the clutch drum. The metal pushed from the end wall of the clutch drum through the minimally sized apertures on the drive means flange, is pressed against a die and forged into the shape of the counter sunk or counter bored portion of each minimally sized aperture proximate to the said die, forming a mechanical connection.

3. The clutch drum assembly as in claim 1, where the drive means is inserted into the clutch drum so that the drive means flange is flush with the inside wall of the clutch drum and the drive means spline or drive sprocket

projects axially through the end wall opening of the clutch drum, or the drive means flange is centrally mated with the outside end wall of the clutch drum with the drive means spline or drive sprocket projecting axially outwards away from the clutch drum.

4. In a method of assembly the clutch drum assembly of claim 1, where the clutch drum and drive means are mechanically connected in a single step using a blunted or two step punch tool with an equal number of axial protrusions as there are minimally sized apertures in the drive means flange. The blunted or two step punch tool being used to press the clutch drum end wall metal through the minimally sized apertures in the drive means flange, and on passing through the minimally sized apertures, the clutch drum end wall metal expands to fill the counter bored or counter sunk portion which is of a greater size than the minimally sized apertures forming the mechanical connection.